Residential Heating

ecodan
Renewable Heating Technology

MITSUBISHI ELECTRIC

Delivering Affordable Warmth For Social Housing

Presented by | William Rossiter, Specification Manager

Audio

Attendees will be in listen only mode to ensure the best experience for all

Questions

We welcome these & ask that your questions be submitted for the Q&A session

Recording

We are recording this session to enable access at your convenience

Agenda

- Why the need for change?
- Net Zero Carbon targets
- Future Homes Standard
- Funding Streams
- RHI & Clean Heat Grant
- Project delivery
- Q & A

Why the need for change

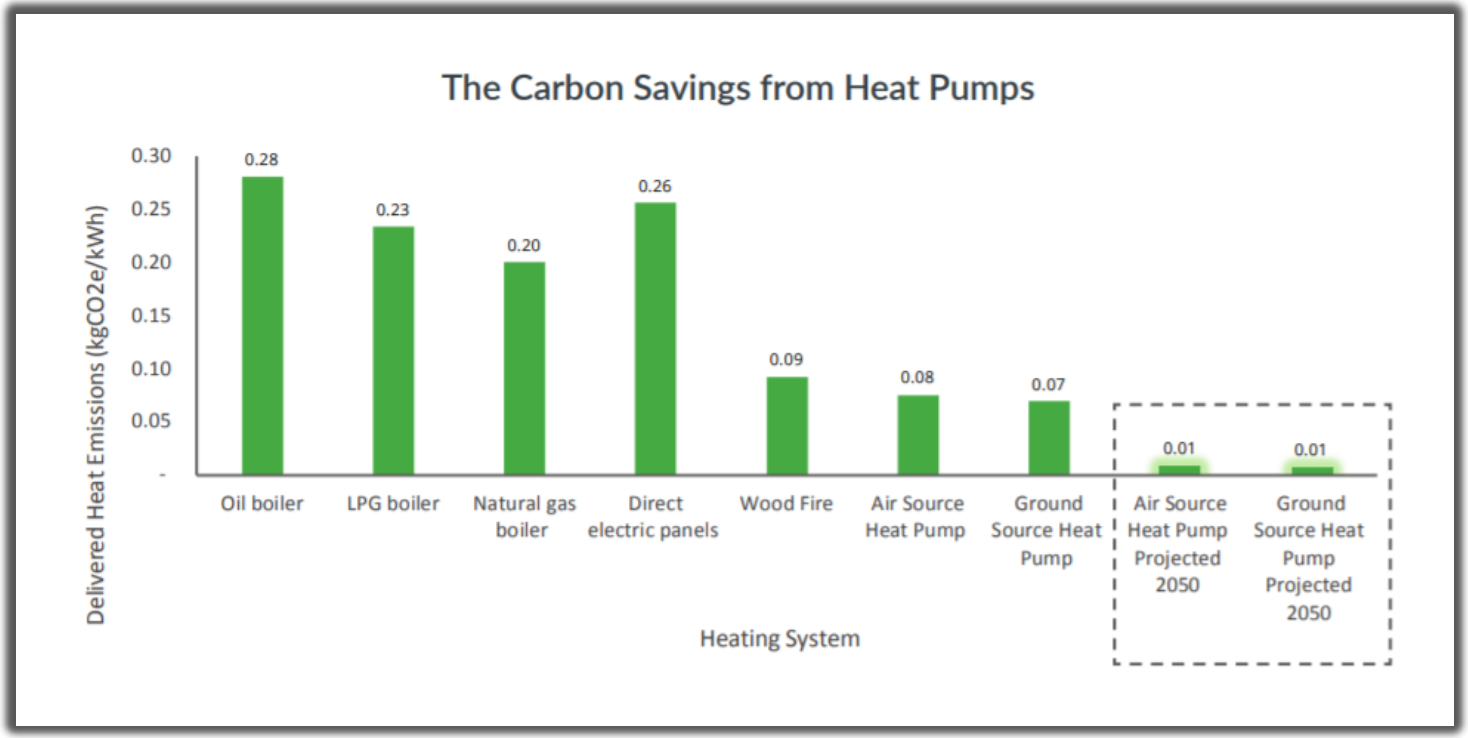
- There are 3.9 millions social housing properties in the UK
- Social housing contributes 10% of all emissions in the UK.
- 9% of social houses in fuel poverty
- Lack of clear strategy for change from the Government
- Fuel poverty, health issues and rising costs to social providers
- Current social housing is not fit for 2050

Net Zero Carbon

- The Climate Change Act of 2008
- Committee on Climate Change report – Net-Zero
- Climate budgets

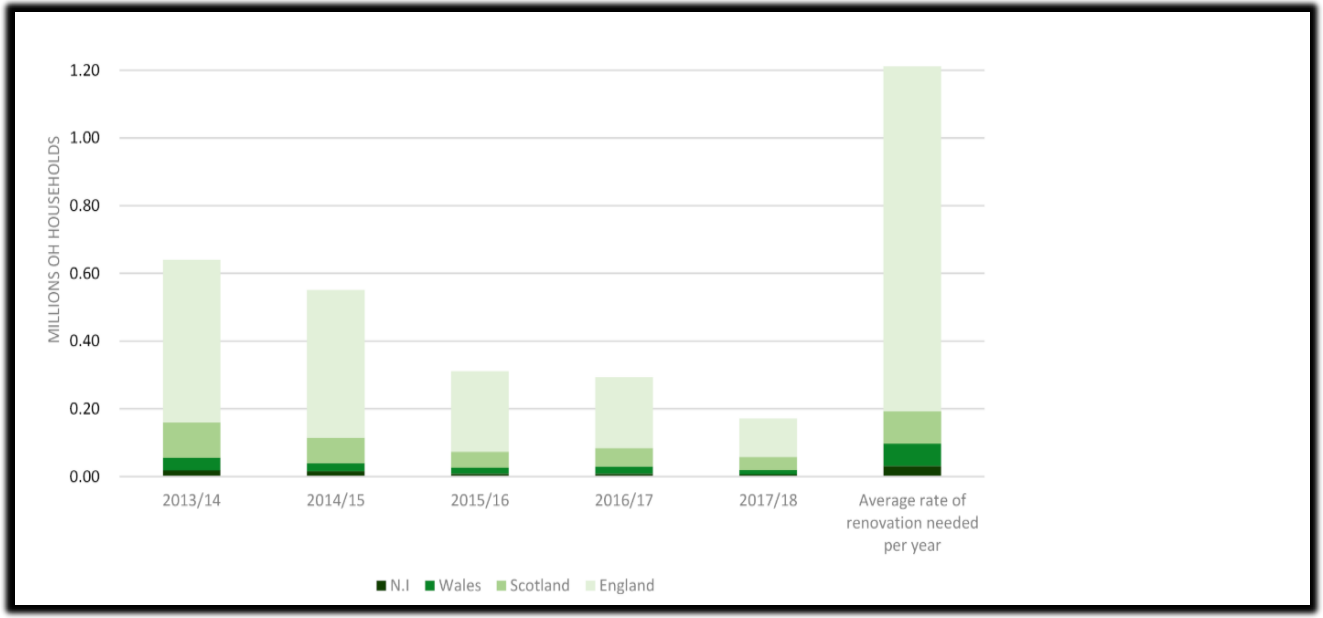
“Only a combination of deep retrofit of existing social housing, raising the standards of all new builds and encouraging rapid market growth of low carbon heating systems such as heat pumps can be successful in achieving the Net Zero Target”

Carbon Savings



EPC C 2030

- Band E by 2020 → Band C by 2030

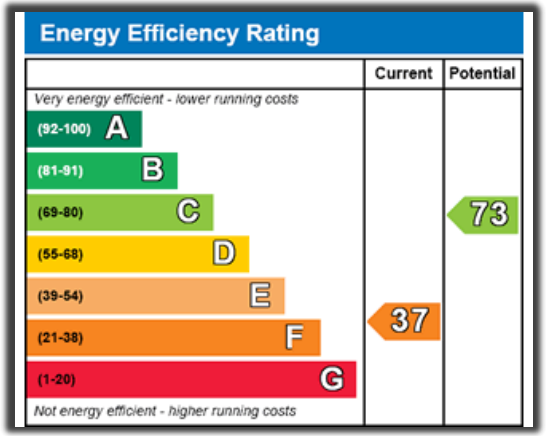


https://publications.parliament.uk/pa/cm201719/cmselect/cmbeis/1730/173005.htm

EPC C 2030

Improving EPC's will benefit both the social housing provider and the tenant

- More efficient homes = less carbon emissions
- Less fuel poverty = few rent arrears
- Better air quality in properties = improved tenant health
- Improved home quality = fewer repairs required
- Lenders may not use homes below EPC C as collateral



The Future Homes Standard

ecodan Renewable Heating Technology

MITSUBISHI ELECTRIC

The Future Homes Standard (FHS)

A roadmap for energy efficiency standards

- 2019 spring statement introduced the FHS to the public
- By 2025 homes are to be future proofed with low carbon heating and world leading levels of energy efficiency
- A new home built to Future Homes Standard expected to be 75-80% lower CO2 than current regulations
- In order to start progress to this goal, it is proposed an uplift to Part L will be delivered in 2020

80%

Reduction in CO2

Option 1: Future Homes Fabric

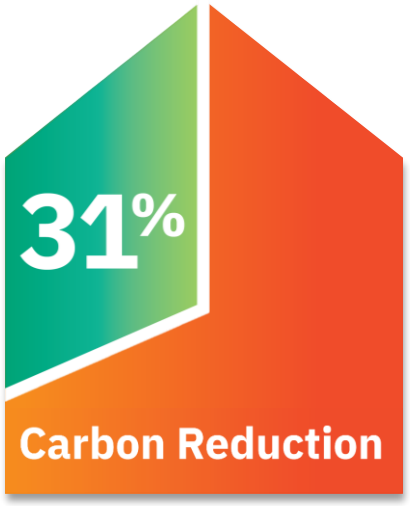
A step towards new dwellings with improved fabric thermal performance

- Designed to reduce carbon by 20% vs. current regulations
- Average cost increase of £2870 per dwelling
- Expected to be delivered by high standards of fabric and is not reliant on renewables
- The target a dwelling is competing against would include; triple glazing, lower U-values, higher levels of air-tightness, waste water heat recovery & gas boiler

Option 2: Fabric + Technology

Additional step that is stated as the Governments preferred option

- Designed to reduce carbon by 31% vs. current regulations
- Average cost increase of £4620 per dwelling
- Encourages the use of low carbon & renewable tech
- The target a dwelling is competing against would include:
  - Fabric improvements (not as tough as option 1)
  - Gas boiler, WWHR[1] & PV[2] Panels



[1] WWHR = Waste Water Heat Recovery / [2] PV = Photovoltaic Panels

Option 1 & Option 2 comparison

An analysis for both gas boiler and Air Source Heat Pump solutions

	L1A fabric standard		GAS		ASHP	
	2013	2020	Needed to pass option 1	Needed to pass option 2	Needed to pass option 1	Needed to pass option 2
Wall	0.3	0.26	0.18	0.18	0.22	0.22
Roof	0.2	0.16	0.11	0.11	0.12	0.12
Floor	0.2	0.18	0.11	0.11	0.11	0.11
Doors	2	1.6	1	1	1	1
Windows	2	1.6	0.9	0.9	1.4	1.4
Air-tightness	10	8	5	5	5	5
Technology			1.3 kWp PV	2 kWp PV	Additional technology is not required	-
			WWHR	WWHR		-
			-	MVHR		MVHR

[1] WWHR = Waste Water Heat Recovery / [2] PV = Photovoltaic Panels / [3]MHVR = Mechanical Ventilation with Heat Recovery

POLL QUESTION

When do you expect your organisation to achieve net zero?

- 2030 – 2035 / 2035 – 2040 / 2040 – 2045 / 2045 - 2050

Funding Streams – Social Housing Decarbonisation Fund

Social Housing Decarbonisation Fund Demonstrator

- £50million grant programme
- To be used to improve the least efficient homes
- To be used for innovative projects with ASHP included
- Reduce cost of whole house approach
- Reduce fuel poverty and carbon emissions

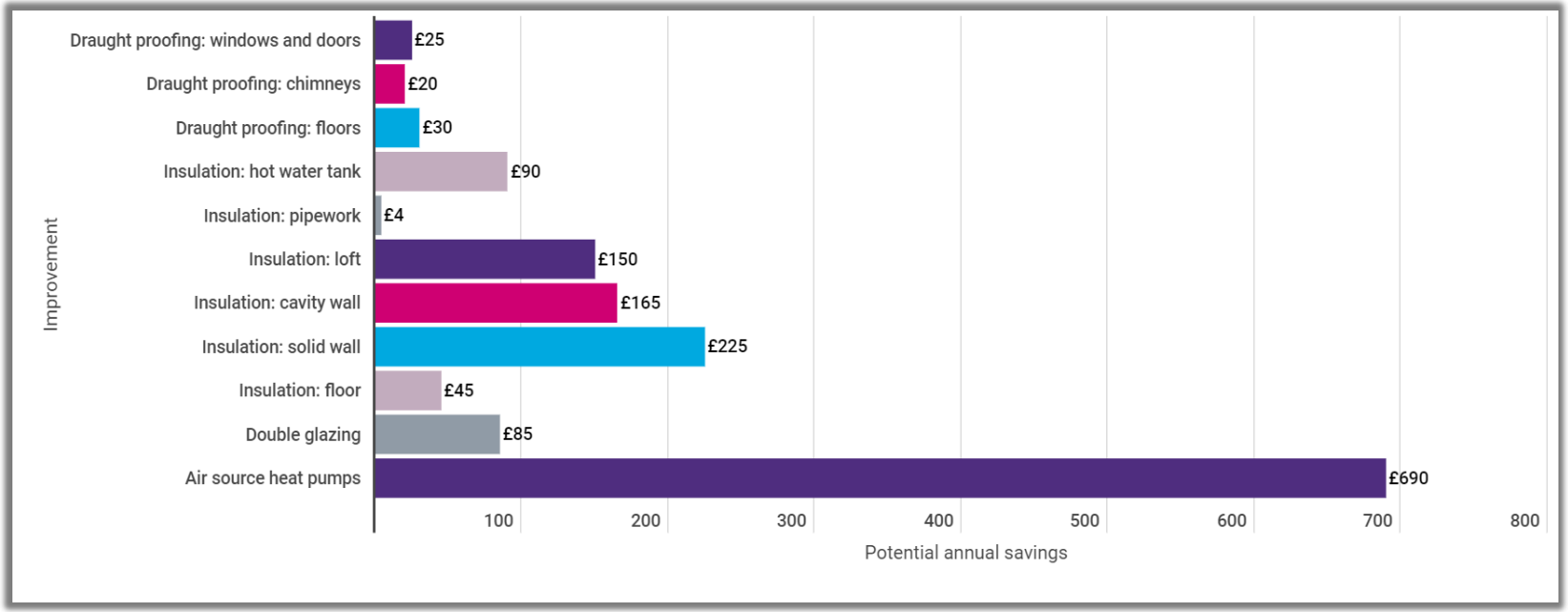
Green Homes Grant – LAD Scheme

- The Government have announced £2 billion worth of funding to help improve the energy efficiency of UK homes
- £500 million funding for LAD scheme
- £200 million available for first bid with work completed by 31st March 2021
- Further £300 million available in 2022

Green Homes Grant – Voucher Scheme

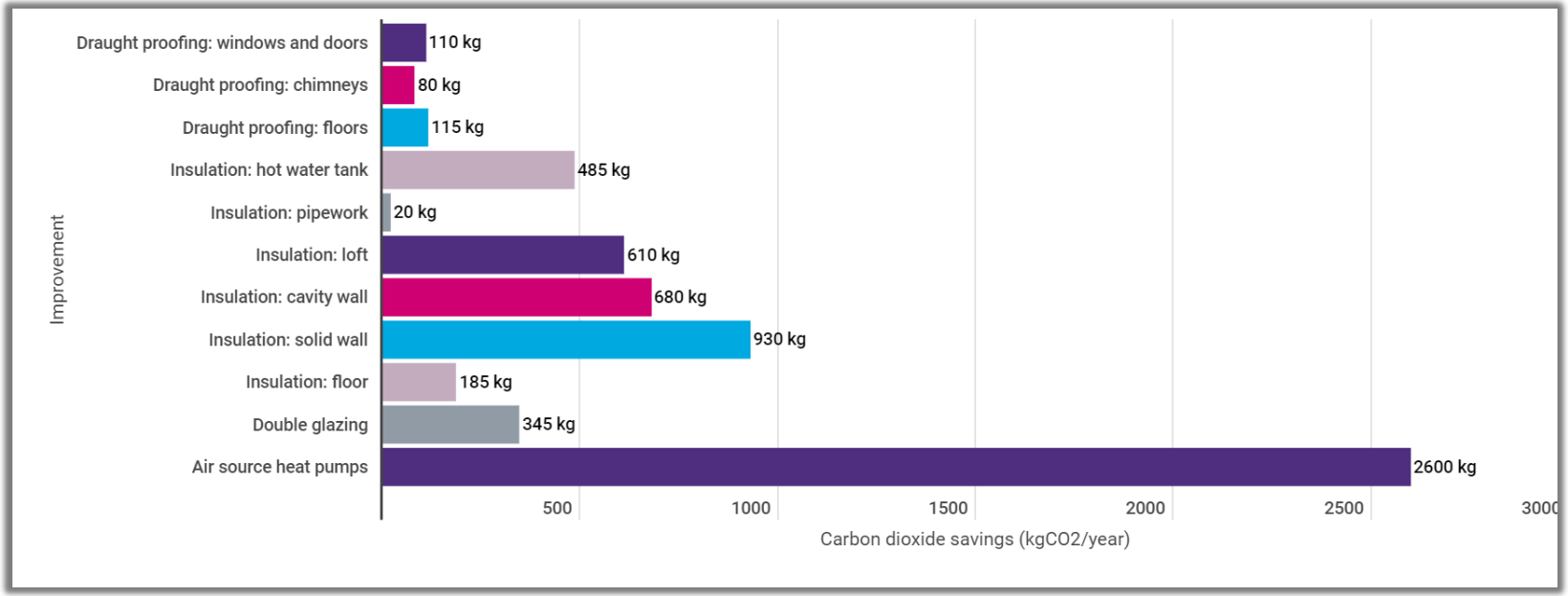
- Incentive to support landlords to improve their housing stock
- Primary measures
- Secondary measures
- RHI eligible
- TrustMark registered installers

Green Homes Grant – Example



https://energysavingtrust.org.uk/home-insulation/green-homes-grant-scheme

Green Homes Grant – Example



https://energysavingtrust.org.uk/home-insulation/green-homes-grant-scheme

RHI – Renewable Heat Incentive

- Government tariff to support the uptake of renewable technologies
- Deemed from the properties EPC
- 10.85p/kWh
- Paid out quarterly for 7 years by Ofgem
- Needs to be installed by an MCS accredited installer
- RHI applications have been extended to March 2022

RHI – Renewable Heat Incentive

Calculated at SCOP of 4.08 -PUHZ VAA @ 45 Degree FT Design										
Indicative - Full survey required by MCS Installer				PROPERTY TYPE		CAVITY FILLED			SCOP 4.08	
Est. Heat Load	Heat pump	Cylinder		BED	FLOOR	Heating	DHW	TOTAL	1 year	7 Years
At 60w m2	Ecodan Kw	Litres		Units	M2	kWh/yr	kWh/yr	kWh/yr	10.85p	10.85p
4.27	5	150	FLAT	2	61	4441	3742	8183	662	4631
5.53	8.5	210	Mid Terrace	3	79	5262	3742	9004	728	5096
5.18	8.5	210	Semi Bung	3	74	6808	3742	10550	853	5971
6.23	8.5	210	Semi House	3	89	9674	3742	13416	1085	7593
7.28	8.5	210	Detached House	3	104	15774	3742	19516	1578	11045

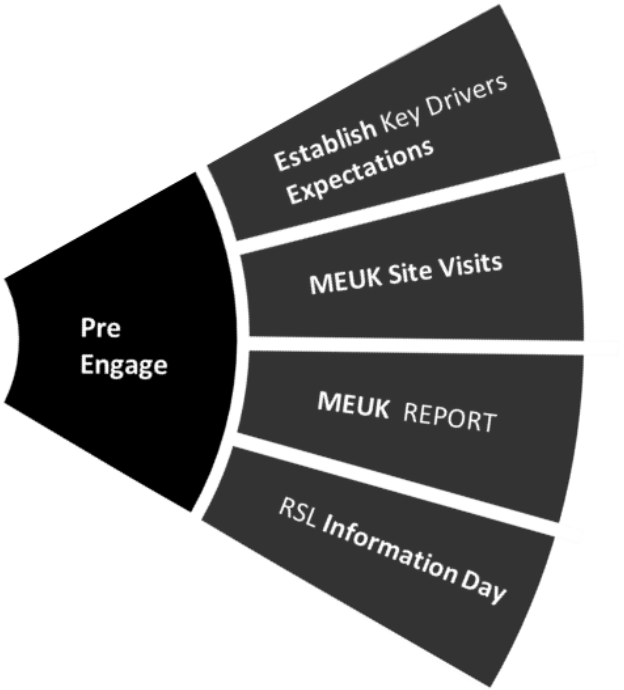
Clean Heat Grant – In consultation

- An upfront payment of £4,000 for any ASHP installation
- Comes into place April 2022
- Committed to running the grant until March 2024
- First come first served basis
- £4,000 per property regardless of size

POLL QUESTION

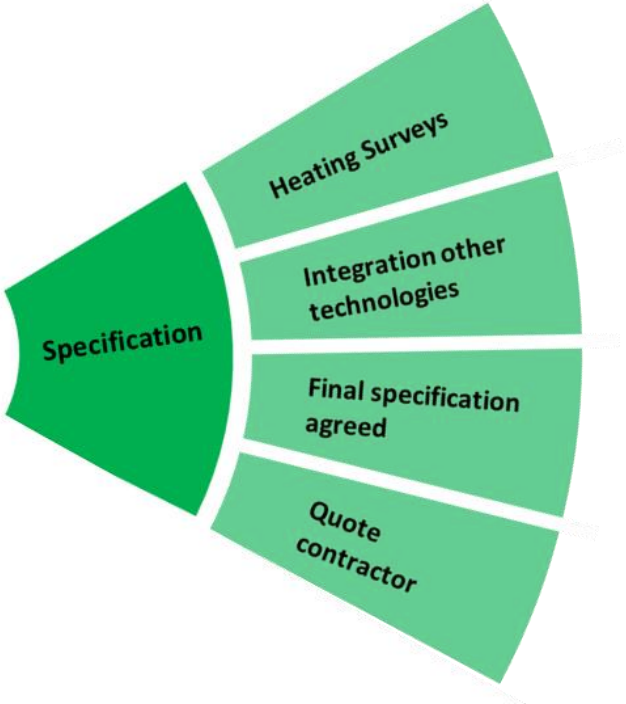
- How likely is the clean heat grant to have an impact on increasing your low carbon heating programme?


Pre Engage
Establish Key Drivers Expectations
MEUK Site Visits
MEUK REPORT
RSL Information Day
Project
Solution Selection
Training Preferred contractors
Tenant engagement
Training Sales / Clients
Specification
Heating Surveys
Integration other technologies
Final specification agreed
Quote contractor
Installation
MEUK Project visits throughout
MEUK Installer Updates and Support
Configure Welcome Packs
MELcloud ready
Completion
Home Owner Guarantee registered
Metering access set up
MEUK site overview
Post install meeting
Post Install
Handover Packs– Tenant Survey
Service & maintenance
After sales procedures
Homeowner Help line
MITSUBISHI ELECTRIC
Changes for the Better
ecodan


Pre Engage
Establish Key Drivers Expectations
MEUK Site Visits
MEUK REPORT
RSL Information Day


ecodan
Heat Your Home For Less
Enjoy an extra warm feeling
Don't get left behind


MITSUBISHI ELECTRIC
Changes for the Better
ecodan
Renewable Heating Technology
Project
Solution Selection
Training Preferred contractors
Tenant engagement
Training Sales / Clients



MITSUBISHI ELECTRIC
Changes for the Better

ecodan
Renewable Heating Technology

MITSUBISHI ELECTRIC UK – LIVING ENVIRONMENTAL SYSTEMS

Pre-Tender Specification

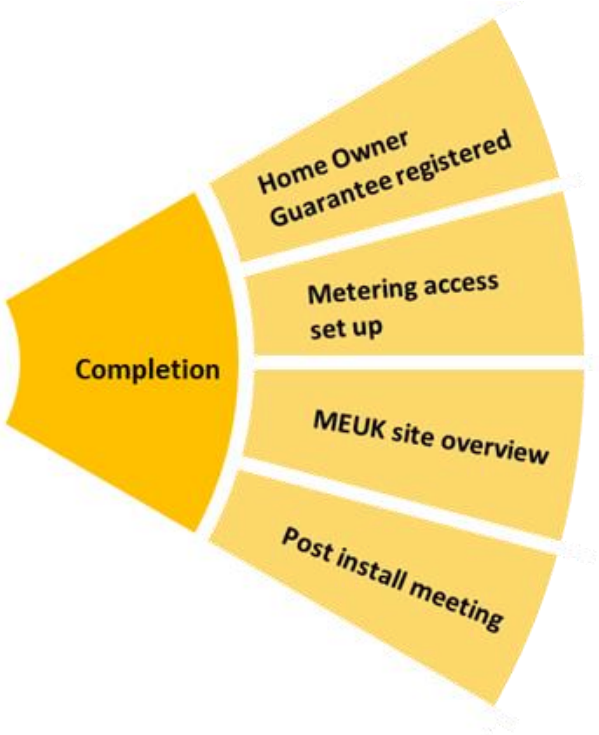
Requirements for Heat Pump Installations

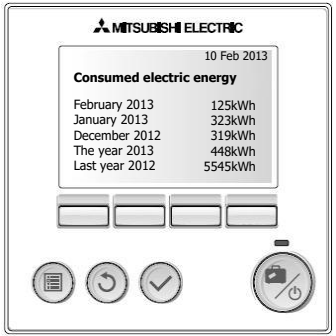
[Pick the date]

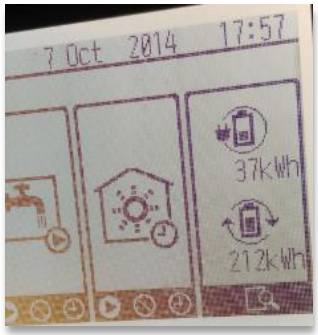
SECTION 2
SPECIFIC WORKS - MECHANICAL

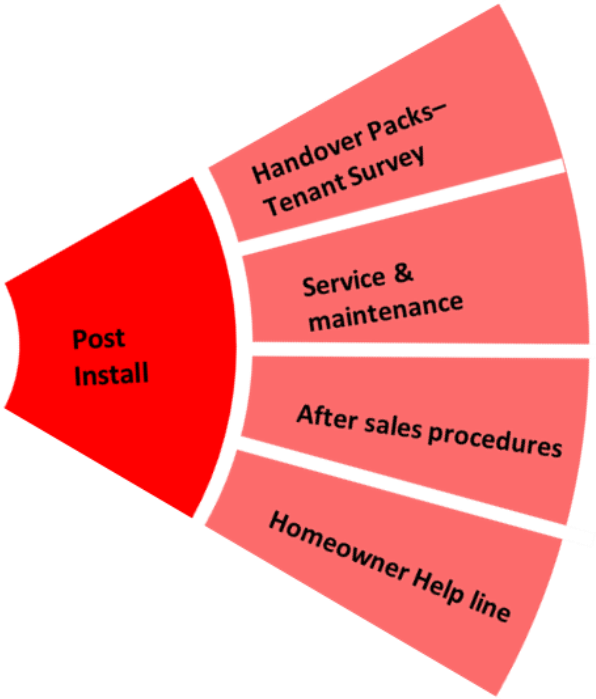
CONTENTS


Installation
MEUK Project visits throughout
MEUK Installer Updates and Support
Configure Welcome Packs
MELcloud ready


Completion
Home Owner Guarantee registered
Metering access set up
MEUK site overview
Post install meeting


MITSUBISHI ELECTRIC
10 Feb 2013
Consumed electric energy
February 2013 125kWh
January 2013 323kWh
December 2012 319kWh
The year 2013 448kWh
Last year 2012 5545kWh


7 Oct 2014 17:57
37kWh
212kWh

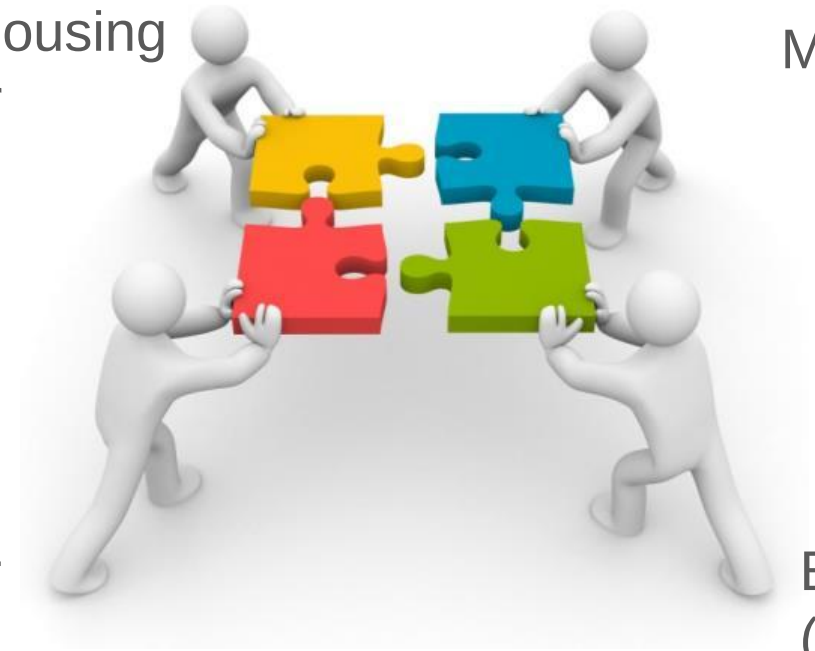

Handover Packs–
Tenant Survey
Service &
maintenance
Post
Install
After sales procedures
Homeowner Help line


ecodan
Renewable Heating Technology
MITSUBISHI
ELECTRIC
Homeowner
Quickstart Guide
heating.mitsubishielectric.co.uk

Partnership

Social Housing Provider

Manufacturer



Installer

End user (tenant)

Mass Market and Product Innovation

- R32 A+++
- Lower GWP
- Full range of pre plumbed cylinders
- FTC6 smart grid capability
- Gearing up for mass market

POLL QUESTION

- How did you find this webinar?

Residential Heating

ecodan
Renewable Heating Technology

MITSUBISHI ELECTRIC

Q&A Session

Presented by | Max Halliwell & Georgie King

Thank You

T: 01707 278 666
E: heating@meuk.mee.com
W: ecodan.co.uk

Presented by | William Rossiter, Specification Manager